UNITED STATES ENVIRONMENTAL PROTECTION AGENCY August 2015

Determination of No Further Action

Former Aubrey Manufacturing, Inc. 6709 South Main Street Union, Illinois ILD 005 238 159

						•
	•					
						•
					•	
			4			÷
				•		
4						
	·	·			•	
		·				
		•				

Former Aubrey Manufacturing, Inc. 6709 South Main Street Union, Illinois RCRA ID: ILD 005 238 159

INTRODUCTION

This Determination of No Further Action (NFA) document for the former Aubrey Manufacturing, Inc., located at 6709 South Main Street, Union, McHenry County, Illinois, and hereinafter referred to as "Facility", explains the basis for the United States Environmental Protection Agency's (EPA's) determination that no further action is required for this Facility.

This Final Decision relies on the Illinois EPA (IEPA)'s previously issued review and approval of a Resource Conservation and Recovery Act (RCRA) surface impoundment closure and issuance of an Environmental Land Use Control (ELUC) and a Highway Authority Agreement (HAA) for the Facility. The ELUC and HAA were recorded with the McHenry County Recorder's Office on May 11, 2005 and May 19, 2005 as Document Numbers 2005 R0036568 and 2005 R039007, respectively.

This NFA summarizes information that can be found in greater detail in the site files for this Facility. The EPA and the IEPA, which directed the closure of the regulated unit at the Facility, encourage the public to review these documents in order to gain a more comprehensive understanding of the Facility and RCRA regulated corrective action and closure activities that have been conducted there. Important documents for this NFA determination are as follows:

- November 4, 1992 IEPA notification that RCRA closure required for surface impoundment.
- April 15, 1993 RCRA Surface Impoundment Closure Plan.
- June 9, 1993 Background and confirmatory soil sampling for surface impoundment soil removal.
- September 8, 1993 IEPA approval of no further action for surface impoundment soil remediation.
- October 13, 1995 Groundwater Investigation Report.
- February 21, 1997 Corrective Action Status Report and Work Plan Addendum.
- July 1, 1997 IEPA approval of the Corrective Action Status Report and Work Plan Addendum.
- April 9, 1998 Preliminary Assessment and Visual Site Inspection (PA/VSI).
- October 14, 1999 EPA Inspection Report.
- December 10, 1999 EPA CA725 (current human exposures under control) determination.
- December 10, 1999 EPA CA750 (migration of contaminated groundwater under control) determination.
- January 10, 2003 IEPA letter describing conditions required for RCRA closure with controls; including filing of institutional controls, closure report and well abandonment procedures.
- February 18, 2005 ELUC filed in McHenry County May 11, 2005.
- February 15, 2005 HAA filed in McHenry County May 19, 2005.
- September 2005 Closure Documentation and Certification Report.
- October 18, 2005 IEPA Closure Inspection.
- November 10, 2005 IEPA Closure Report approval and No Further Action (NFA) with controls determination.

- July 31, 2008 Soil and Monitoring Well Sampling Report.
- October 9, 2009 Phase I Environmental Site assessment (ESA).
- November 3, 2009 IEPA No Further Action (NFA) Determination letter.
- February 9, 2015 Phase I Environmental Site assessment (ESA).

These documents reference the corrective measures taken to investigate all potential past releases to soil and groundwater, and close the RCRA regulated surface impoundment at the Facility. All soil contamination was removed and institutional controls were implemented to prevent exposure to groundwater contamination remaining at the Facility.

DETERMINATION

Based on the information contained in the documents listed above, the EPA hereby concludes that no further corrective action is required at this Facility, with the IEPA controls. All hazardous waste issues at the Facility have been resolved and as long as Institutional Controls established by IEPA are maintained, no additional remedial actions are required.

FACILITY BACKGROUND

Location and Company History

The former Aubrey Manufacturing Facility is located at 6709 South Main Street, Union, McHenry County, Illinois. The Aubrey property covers approximately 21 acres, which includes 197,000 square feet of combined manufacturing and office building space. Aubrey manufactured ventilation products and electrical heaters at this location from 1953 until 2008, when the property was bought by the current owner, Miceli Drapery Company, Inc., a manufacturer of window treatments for the hospitality and commercial industry. In 1988 Broan Manufacturing, Inc. purchased Aubrey in an asset purchase. To the east is Main Street, south and west are corn fields, and north are residential houses. The topography is relatively flat with a drainage ditch to the southeast of the Facility. Figure 1 shows the Facility location and Figure 2 the general site features.

Waste Generation and Management History

From 1953 to 1985, brass, copper, and zinc electroplating using cyanide was conducted at the former Aubrey facility. Until 1985 the plating wastewater was treated in an on-site surface impoundment. This surface impoundment was determined to be regulated under RCRA. The surface impoundment had documented releases to soil and groundwater. Aubrey submitted a closure plan for the impoundment on April 15, 1993 after being notified on November 4, 1992 by IEPA that the impoundment was a land disposal unit requiring RCRA closure. On April 9, 1998, EPA prepared a RCRA PA/VSI. The PA/VSI identified 8 Solid Waste Management Units (SWMUs) at the former Aubrey facility: the surface impoundment (SWMU 1); a waste oil accumulation area (SWMU 2); a waste hydraulic oil accumulation area (SWMU 3); two wet spray paint hazardous waste satellite accumulation areas (SWMUs 4 and 5); a 90-day hazardous waste accumulation area (SWMU 6); a water treatment system (SWMU 7); and a paint kitchen hazardous waste satellite accumulation area (SWMU 8). SWMUs 2 through 8 were located indoors in an area with a sealed concrete floor; and a secondary containment berm was erected around SWMU 7 (several treatment tanks and a filter press). The RCRA PA/VSI concluded that there were no documented or potential releases from SWMUs 2 through 8, but that SWMU 1 had potential or documented releases to soil and groundwater. At the time of the PA/VSI, SWMU 1 releases were being

addressed by the IEPA through RCRA closure. In 1999, the Facility was added to the list of RCRA Facilities for which EPA would track Government Performance and Results Act (GPRA) Environmental Indicators. An inspection by the EPA on October 14, 1999 confirmed the conclusions of the 1998 PA/VSI; that only SWMU 1 (surface impoundment) required further investigation. The other SWMUs were located indoors with no evidence of releases to the environment. Since the IEPA was handling closure and remediation of releases from the surface impoundment, a separate corrective action investigation by EPA was not necessary. On December 10, 1999 EPA determined that current human exposures (CA725) and migration of contaminated groundwater (CA750) were under control. All soil contamination had been removed from the surface impoundment (September 8, 1993 IEPA approval of no further action for surface impoundment soil remediation); and a groundwater monitoring program for the Facility was in place by the IEPA.

On November 10, 2005 the IEPA approved Aubrey's certification that the surface impoundment had been closed according to the approved plan and that no further action was necessary. This approval included placing the facility under an Environmental Land Use Control (ELUC) and a Highway Authority Agreement (HAA). The ELUC and HAA were necessary to restrict groundwater at the facility from use as a potable water supply for perpetuity. On July 31, 2015 EPA inspected the facility to confirm that in the proceeding ten years nothing had changed at the facility that would prevent EPA from determining that no additional corrective action was necessary. This inspection confirmed that the previous SWMUs operated by Aubrey had now been removed from the property; and that the current property owner since 2008, Miceli Drapery Company, had no waste management operations that had the potential to cause releases to the environment. Current waste generation is limited to a small contained paint spray booth and a small waste oil accumulation area.

Geologic and Hydrogeologic Setting

The geology of the Union, Illinois area consists of Paleozoic aged sedimentary bedrock (shale and dolomite) overlain by unconsolidated glacial material (sandy clay tills with variable amounts of pebbles and gravel). At the Facility there is topsoil, fill, concrete and/or asphalt underlain by approximately 70 feet of sandy, silty clay till with minor amounts of discontinuous sand lenses. Within a mile of the Facility there are 33 private domestic water wells, and 20 public water supply wells are within 2 miles of the Facility. The Union City water supply wells are drilled from 750-1000 feet deep within the Paleozoic aged bedrock. Private water wells can be as shallow as 15 feet deep within continuous water bearing sand lenses within the till. Depth to the water table is 5 feet and groundwater flow is to the East.

Ecological Setting

The entire Facility is covered by gravel, concrete and/or asphalt, grass and a single building. There are no on-site ecological or aquatic habitats. Given the Facility's physical setting, the lack of quality on or off-site ecological habitat, and the completion of the SWMU 1 closure investigations, the Facility would not be expected to provide suitable ecological habitat and the level of ecological risks has been determined to be negligible.

Investigation Results

SWMU 1 - Former Surface Impoundment.

Description and Release History

This unit consisted of an impoundment which was approximately 60 feet long by 30 feet wide by 10 feet deep. Brass, copper, and zinc plating wastes were treated in this unit from 1953 to 1984. In 1992/1993 soil, sludge and debris from the unit was shipped to Peoria Disposal Company under the following hazardous waste codes; F001, F002, F003, F005, F006, F007, and F008. Water from the impoundment was sent to Clean Harbors of Chicago. All soil contamination was removed from the extent of the surface impoundment, but groundwater contamination is present within the upper unconsolidated glacial deposits beneath SWMU 1 and directly down gradient from it extending approximately 800 feet east to the property boundary. Groundwater is contaminated by trichloroethene (TCE), trichloroethane (TCA), vinyl chloride (VC), nickel, chromium, lead, and selenium above IEPA drinking water standards.

The 2009 Phase I ESA and the 2008 soil and groundwater data collected by the new property owner, Miceli Drapery Company, confirmed the recorded conditions present in 2005, when the IEPA closed the surface impoundment with a groundwater use control. Three wells were installed and sampled which confirmed the previously known groundwater contamination. VC was detected at lower concentrations, while TCE at one well was detected at a slightly higher concentration.

Release Controls, Response Actions, and Environmental Data

SWMU 1 had no release controls. On November 4, 1992, IEPA notified Aubrey that this unit was considered a land disposal unit and therefore must undergo RCRA closure. In 1993 Aubrey initiated closure activities. The impoundment was dewatered, and all contaminated soil, sludge, and debris was removed followed by confirmatory soil sampling. Approximately 2,143 cubic yards of soil were removed during remediation activities. 41,900 gallons of water were pumped from the excavation. All residual sludge and soil contamination was removed from SWMU 1. Figure 3 shows the location of confirmatory and background soil sampling for the surface impoundment closure. Several samples had detected metals contamination, but the levels were found to be reflective of background concentrations. On September 8, 1993, IEPA determined that all soil remediation for this SWMU had been completed. The manufacturing building was expanded over the former surface impoundment in 1994.

Groundwater was found to be contaminated beneath SWMU 1 to a distance approximately 800 feet down gradient from the impoundment. Quarterly groundwater monitoring was conducted from 1993 to 1998 and then annually from 1999 to 2002. The plume is contained within a sand layer at a depth of 10 to 30 feet below ground surface (bgs), within the upper 60 feet of till beneath the Facility. Detected Volatile Organics Constituents (VOCs) during groundwater investigations included vinyl chloride (VC), trichloroethene (TCE), trichloroethane (TCA), dichloroethane (DCA), dichloroethene (DCE) and nickel. Some of the contamination in the plume has crossed the facility's eastern boundary under the bordering highway. Constituents above applicable cleanup standards (IEPA Class II Groundwater) are TCE (83 to 250 ppb), DCE (470 to 560 ppb), and vinyl chloride (70 to 120 ppb). The downgradient portion of the plume contains degradation products of TCE, including cis-1,2-DCE, 1,1-DCA, and vinyl chloride. IEPA determined that the TCE and TCA is undergoing reductive dechlorination into the following daughter products: cis-1,2-DCE, 1,1-DCA, trans-1,2-DCE, chlorethane, and vinyl chloride. IEPA determined that the contamination was contained on site, stable and degrading through natural attenuation. Parent and daughter product concentrations have decreased with time and distance from the former surface impoundment. The groundwater plume beneath the Facility occurs within thin silty sands and on the eastern boundary of the Facility the sand is more continuous. At Monitoring Wells 13 and 14 some VOC concentrations were found to periodically increase, however there were no consistent temporal or spatial trends indicative of an expanding or migrating plume. Two of the three new wells

from 2008 were installed near Wells 13 and 14. Figure 4 shows the location of the 2008 wells. Both wells had lower VC concentrations (29 and 3.4 ppb), while one had a slightly higher TCE concentration (470 ppb, the other was non-detect). This data was sent to IEPA, and on November 3, 2009 IEPA responded that no additional sampling was necessary and that the previous 2005 NFA determination remained valid.

The groundwater contamination is found at a depth of 10 -30 feet bgs. The distribution of constituents within the groundwater plume is irregular and not consistent with a single source (i.e. the former surface impoundment). Concentrations of VOCs near the former surface impoundment contain VC ranging from less than 1 to 41 ppb and no other chlorinated solvents, whereas groundwater on the east side of the property contains TCE, TCA, cis-1,2-DCE, 1,1-DCA, 1,1-DCE and VC at concentrations from 1 to 600 ppb. This is not consistent with a single continuous plume. To the east of the manufacturing building the groundwater contamination was most likely due to other sources from Aubrey. On the east side of the manufacturing building there is a septic holding tank.

SUMMARY OF FACILITY RISKS

Human Health Risks

Based on the available information cited above from the closure of the surface impoundment, this former hazardous waste management unit was closed by the IEPA, with no further action required on November 10, 2005. All waste and contaminated soil in the unit was removed; however the Facility remained subject to an ELUC and a HAA which restricted groundwater from use as a potable water supply within the areas of remaining contamination as shown in Figure 5. The ELUC and HAA protect humans against exposure to contaminated groundwater. The impacted groundwater is not the source of drinking water for the Facility or any neighboring properties and the area of groundwater contamination is not within the setback zone of any private or public water supply wells. The November 10, 2005 closure approval by IEPA determined that the zone of vertical and horizontal contamination had been defined (as specified in the ELUC), and was stable and naturally attenuating through reductive dechlorination. Source removal, groundwater monitoring and a plume stability demonstration, combined with the ELUC and HAA means that there is no risk to human health from soil or groundwater contamination. Downgradient wells 17s/17d and 18s/18d had been below cleanup levels for constituents of concern. Continued groundwater monitoring after 2005 was not required. The surface impoundment was closed under 35 Ill. Adm. Code Part 742 Tiered Approached to Cleanup Objectives (TACO). No post-closure groundwater monitoring is required for TACO closures, if the performance standards are attained. Groundwater contamination beneath the facility defined in the ELUC and HAA is shown in Table 1. The new monitoring well data from 2008 was reviewed by IEPA and in 2009 they confirmed that the 2005 NFA remained valid.

At the time of the NFA determination, IEPA had not finalized vapor intrusion regulations for migration of contamination through soil gas vapor into buildings from groundwater contamination. Amendments to the IEPA TACO regulations for vapor intrusion became effective on July 15, 2013. IEPA does not have a policy of reopening NFA determinations for these recent amendments to TACO. Nevertheless, the groundwater contamination at the Facility was compared to Tier 1 look-up tables for indoor air inhalation exposure risk, for protection of industrial workers within a building due to vapor intrusion from groundwater contamination. The wells for which the groundwater use restriction was set for the property had detections of TCE and vinyl chloride, but these concentrations were below the IEPA industrial/commercial screening levels for vapor intrusion risk screening. Monitoring Wells (MW-13D and MW-14D) sampled from 2000 - 2002 had TCE concentrations from 46 to 270 ppb. Four other

downgradient on-site wells had TCE concentrations less than 1 ppb. The IEPA TCE screening level for industrial vapor intrusion risk for a slab-on-grade building is 1300 ppb. MW-13D had VC concentrations from 49 to 140 ppb. MW-9 had VC detected at 3 ppb. The other on-site wells were less than 1 ppb. The IEPA VC screening level for industrial vapor intrusion risk for a slab-on-grade building is 210 ppb. VC and TCE were used to screen vapor intrusion because the other detected VOCs have negligible vapor intrusion risk. None of the downgradient groundwater monitoring wells had detected constituents that exceeded residential or industrial vapor intrusion screening levels. Due to the fact that wells beneath the existing building did not exceed the IEPA screening levels, the small extent of contamination on the east side of the building, the age of the release, and the ventilation of the existing building, it is not expected that vapor intrusion from contaminants of concern would pose a threat to workers in the existing on-site building. The 2015 ESA also concluded that vapor intrusion at the site represents a "De Minimis" risk. IEPA policy also excludes the need for further investigation of vapor intrusion risks, if the groundwater or soil gas is greater than 5 feet vertically or horizontally from an industrial slab on grade building; which is the case at the site.

Ecological Risks

Based on the available information cited above, there is adequate information to conclude that ecological risks are negligible at the Site. The entire Facility is covered by gravel, concrete, an asphalt parking lot, buildings or grass. No surface water is present at the Site. The upper water-bearing groundwater unit is thought to discharge into Railroad Creek (an intermittent stream) 100 to 200 feet past the facility boundary. A one-dimensional, advective model was used to estimate potential future contaminant concentrations of TCE; cis-1,2-DCE; 1,1-DCE; and vinyl chloride at Railroad Creek. The transport model predicted no exceedances of relevant Surface Water Quality Criteria (SWQC) standards for discharge of the upper water-bearing unit into Railroad Creek.

SCOPE OF CORRECTIVE ACTION

The intention of corrective measures is to eliminate the threat of exposures at a Site by meeting the following performance standards:

- 1. Protect human health and the environment;
- 2. Achieve media cleanup objectives, and
- 3. Remediate the sources of releases.

These objectives were met by: removing all residual contamination from the former surface impoundment; and placing an ELUC and HAA on the remaining groundwater contamination to prevent groundwater from being used on the property in perpetuity. Groundwater monitoring combined with plume stability modeling was used to confirm that contamination was not moving off-site or into any sensitive ecosystems. In addition, the remaining groundwater contamination was monitored and the resulting data, including the newer 2008 data, was compared to the current IEPA vapor intrusion regulations, and the level of contamination was below the screening levels for industrial use in a slab-on-grade building. Contaminant levels found in wells downgradient from the facility were also below residential vapor intrusion screening levels.

CONCLUSION

Based upon the information presented in this document and in the Site Files regarding releases and remedial actions performed at this Facility to address those releases, and a 2015 site visit to confirm that there have been no changes to the conditions at the site, EPA has determined that no further action by the federal RCRA corrective action program is necessary at this Facility at this time. Facility conditions were assessed against the objectives for eliminating threats. EPA believes that the closure activities conducted by the former Aubrey Manufacturing, as reviewed and approved by the IEPA, have met those objectives. After review of the Closure activities undertaken at the Facility, and the two EPA site visits, EPA believes that the cleanup of the Site was effective and meets the three performance standards listed above.

The Facility completed remediation of all waste management units in 2005. The documentation from the surface impoundment closure activities demonstrates that the Site has achieved appropriate risk reduction, prevented the migration of contaminants, and eliminated the threat of exposure, based on the conditions established and confirmed by IEPA in 2005 during the closure of the former hazardous waste surface impoundment, and then reaffirmed by Miceli Drapery and the IEPA in 2009. EPA believes that the Site has achieved a CA070NO (No Further Investigation needed), CA400 (Remedy Decision), CA550 (Remedy Construction Complete), CA800 (Ready for Anticipated Use), and CA900 CR (Performance Standards Attained-Controls Required).

EPA reserves the right to change, modify or otherwise rescind this NFA determination based on new information or information not available to EPA at the time of this determination.

Jose G. Cisneros, Chief

Remediation and Reuse Branch

Land and Chemicals Division

Date

11/25/15

	`			
	•			
	·			
		•		
			•	
•				
		·		
	_			
-				
				•
,				
	,			
			•	•.
				· · · · · · · · · · · · · · · · · · ·
	•			
				· · · · · · · · · · · · · · · · · · ·

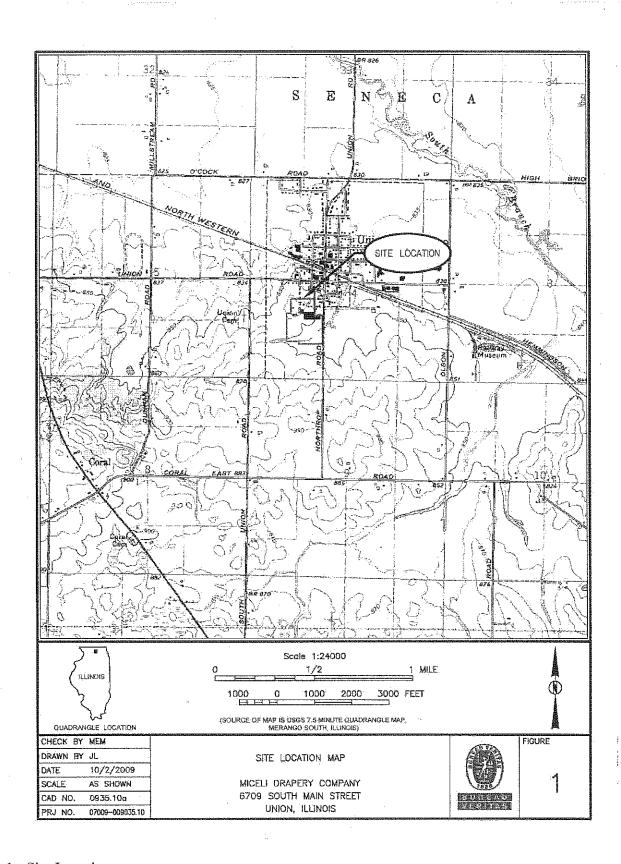


Figure 1: Site Location

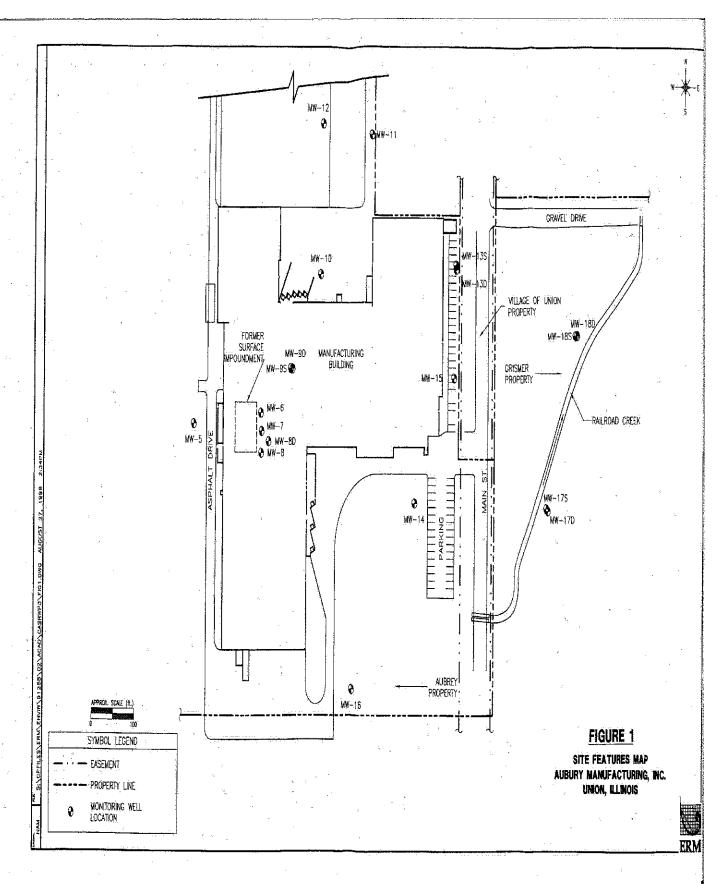


Figure 2: Site Features.

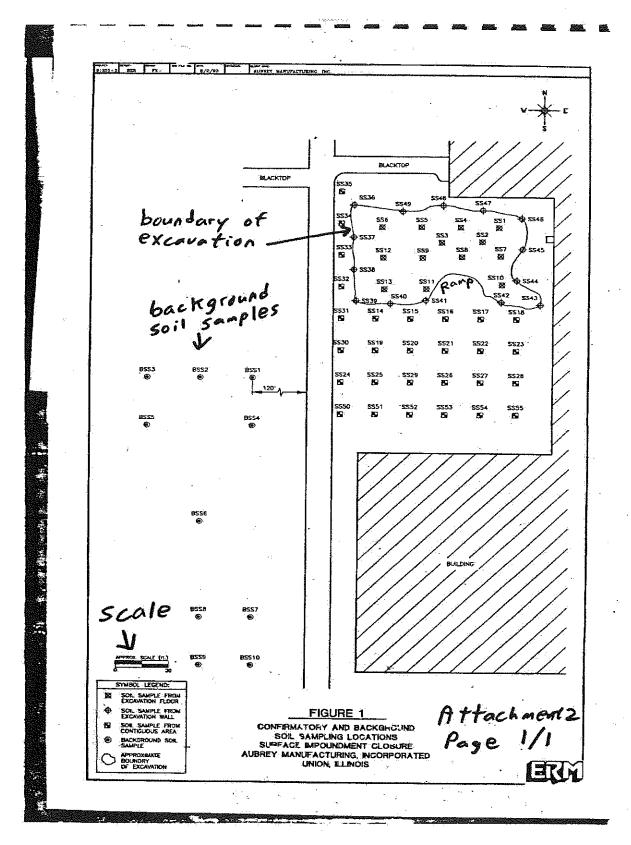


Figure 3: Soil Sample Locations for Surface Impoundment Closure.

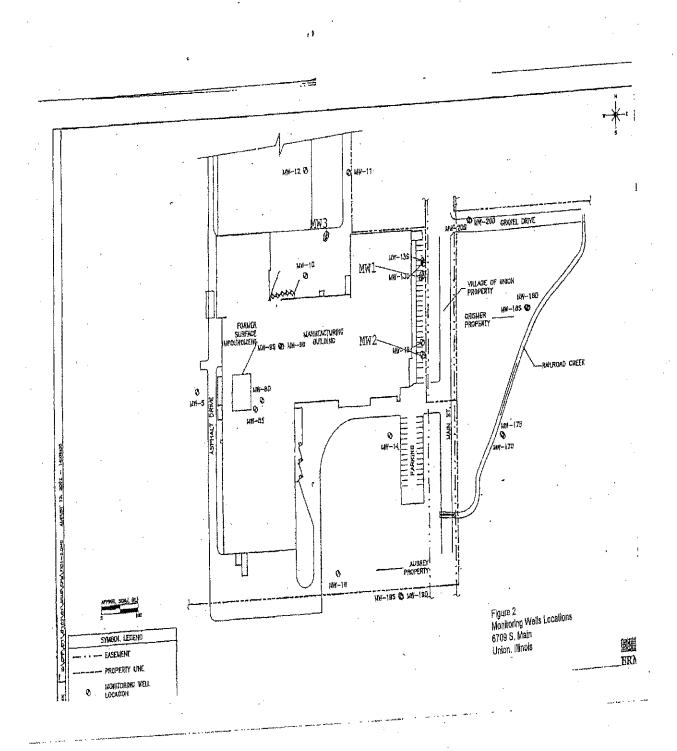


Figure 4: 2008 Monitoring Wells 1-3 Locations.

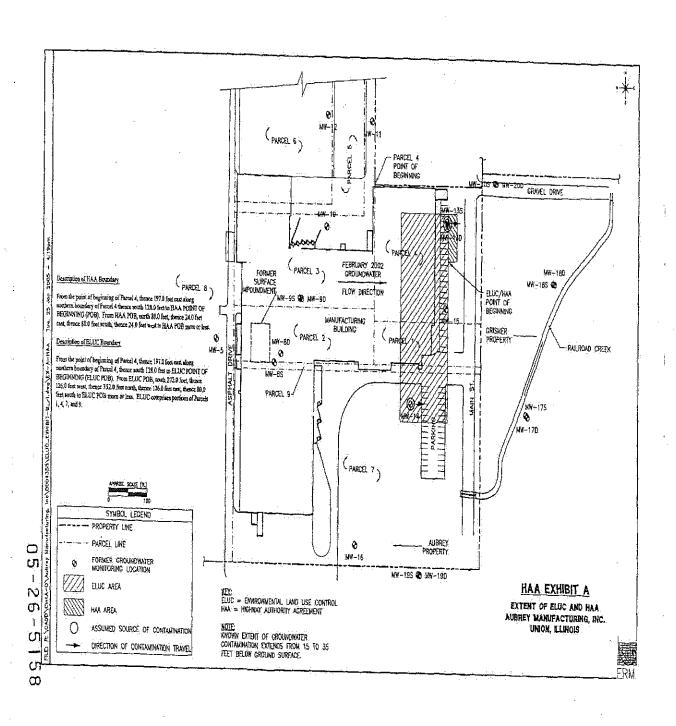


Figure 5: Extent of Environmental Land Use Control (ELUC) and Highway Authority Agreement (HAA).

VOCS AND DISSOLVED NICKEL D' GROUNDWATER -LOWER WATER-BEARING INTERVAL D' FIRST QUARTER 2007 THROUGH FIRST QUARTER 2002 AUBREY MANUFACTURING, INC. UNION, BLINOIS

•	Ground Water	-	Sampling Event													
	Standard	First Quarter 2000 (Marily, 2000)							Third Quarter 2000 (August, 2000)							
Parameters Organic Parameters:	Class II	MW-9D	MW-so	MW-19D	MW-13D Dup	MW-14	MW-18D	MW-9D	MW-10	MW-10 Dep	MW-13D	MW-14	MW-MD'	MW-181		
1.1-Dichloroethane cis-1,2-Dichloroethene transf.1.2-Dichloroethene 1.1.1-Trithloroethane Vinyl chloride Trichloroethylene	20,000 200 500 1,000 10 25	2 U 295 2 U 2 U 3,45 2,09	2 U 2 U 2 U 2 U 2 U 2 U	10 U 318 10 U 10 U 56.3	35.5 328 16 U 10 U 77.3 351	2 U 2 U 2 U 19,7 U 45.2	2 U 2 U 2 U 2 U 2 U 2 U	NA NA NA NA NA	NA 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2	NA 2 U 2 U 2 U 2 U 2 U	NA 670 11 2 U 140	NA 6.16 2 U 48.5 2 U	NA 6.09 2 U 48.6 2 U	NA 2 1 2 1 2 1 2 1 1 2 1 1 1 1 1 1 1 1 1		
dissolved Inorganie Parameters Nickol	2,000	40.5	50 U	37.4	30 U	50 U	-300 TJ	NA.	-50 U	.50 ป				z ca		

U = Companied was not detected.
Single-board values exceed the Class II gre

ហ N (J) Ø

FACEFEATIATION GROUNS PROSHT/ ISTOMY ELUCA HAA EGGENIAN HAA EGGENT A, P.7

EXHIBIT A

VOC: AND DISSOLVED NICKEL IN GROUNDWATER - LOWER WATER-BEARING INTERVAL¹² HIRST QUARTER 2000 THROUGH FIRST QUARTER 2002 AUBREY MANUFACTURING, INC. UNION, ILLINOIS

Page	20(2)

	Ground	Sampling Even!																				
	Water Standard ³	First Quarter 2001 (February, 2001)							Fust Quarter 2002 [February, 2002]										_			
Parameters	Class II	MW	Ð	MY	/10 ·	MW-1	3D	MW	14	MW	18D	MW	-10	MW		MW-13D	MW	-14	WW	(8D	MW-	 200
Organic Farameters: 1,1-Dichloroethane cis-1,2-Dichloroethene trans-1,2-Dichloroethene 1,1,1-Tichloroethane Vinyl-chloride Trichloroethylene	20,000 200 500 1,000 10 25	5 5 5 3.05 1.46	U U U	5 5 5 5 0.214 0.5	บ บ บ บ	42.9 724 9.99 5 120 286	IJ	5 6.65 5 24.4 0.71 71.7	IJ	5 5 5 5 0214	บ บ บ บ	0.5 0.5 0.5 0.5 0.5	U U U U	0.5 0.5 0.5 0.5 0.5	U U U U	43.1 575 10.3 0.5 U 49.1	05 124 05 131 05	U U	0.5 0.5 0.5 0.5	U U U	0.5 0.5 0.5 1.94 9.5	\ { !
Dissolved Inorganic Parameters: Nickel	2,000	50	υ	50	U	50	Û	50	IJ		U.	50	11	50	U	102	50.7		50	ט ט	0.5	

Notes

- All concentrations are in ug/l; only detected constituents are shown.
- See Figure 1 for monitoring well locations
- 3 Ground water standards are based on 35 IAC \$20.420, except for the standards provided by the (EPA for L)-Dichlarocithans.
- * Duplicate sample obtained from monitoring well.

Ke;

g

- NA * Nationalyzes
- U Compound was not delected
- Single-based values racced the Class II ground water thanked

F\CF\ATH\ATHC\U-H\SPROSHT\ISTCO\ELUC & HAA EMBILÆ\HAA EXHIBIT A P.2.

4/8/2005

Table 1 (Page 2 of 2): Residual Groundwater Contamination defined in the ELUC and HAA.

			•
	•		
		-	